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"To enrich lives through effective and caring service"

June 22, 2016

To: Supervisor Hilda L. Solis, Chair
Supervisor Mark Ridley-Thomas
Supervisor Sheila Kuehl
Supervisor Don Knabe
Supervisor Michael D. Antonovich

From: Dave Chittenden
Chief Deputy Director

A handwritten signature in blue ink, appearing to read "D. Chittenden", is written over the printed name and title.

BOARD MOTION OF MAY 24, 2016, ITEM NO. 15 – REASSESSING THE COUNTY EMAIL SECURITY SOLUTIONS

On May 24, 2016, your Board instructed the Acting Director of Internal Services (ISD) and the Chief Executive Officer (CEO) to reassess the County's email security needs within the existing email system with the specific actions:

1. Direct the Acting Director of the Internal Services Department, in coordination with the Chief Executive Officer (CEO), to reassess Los Angeles County's (County) email security needs within the existing email system and report back to the Board of Supervisors (Board) in writing within 30 days with the feasibility of maximizing the tools available in the existing cloud-based Email system;
2. Direct the CEO to sunset the security solution standard approved by the Board on June 16, 2009 that mandated the use of Cisco's IronPort and Registered Envelope for securing all County email communications; and
3. Direct the CEO to prospectively conduct open and competitive solicitations for email and other security solutions.

Summary

The County's migration to the Microsoft Office 365 (O365) cloud-based email migration is now complete with the exception of the Board and Executive Office. In completing that migration, the email security solution, Cisco IronPort (IronPort), was retained with the intent of evaluating the market for the same functionality at better value when the equipment or licenses became due for replacement or renewal.

IronPort servers located at the Downey, Orange County, and Sheriff Data Centers provide email security hygiene for the cloud-based O365 Countywide and Sheriff Email solutions. The District Attorney chose not to route their email through IronPort to facilitate the decommissioning of their Domino gateway and to simplify their email routing infrastructure. Additionally, all inbound Board and Executive Office email is routed through the County's central IronPort system, then forwarded to the Board's IronPort and dedicated Microsoft Exchange email system. As a result, the Board and Executive Office are able to leverage the Advanced Malware Protection features recently implemented in the Countywide IronPort solution.

The IronPort software support renewal occurs annually in June. As a result of this Board Motion, ISD, in collaboration with the County's Chief Information Security Officer (CISO), conducted an IronPort versus O365 Exchange Online Protection (EOP) functionality and cost comparison to determine if the County should consider moving its Email Security support into O365 EOP. The County's O365 cloud-based email system license already includes most of the security features that IronPort provides except for the Advanced Malware Protection (AMP) features which are provided by the County's IronPort license. To get similar advanced threat protection features in the O365 cloud-based solution, the County would need to procure O365 Advanced Threat Protection (ATP) add-on to the County's existing cloud-based license.

Response to Action 1:

Currently, there are 111,573 licensed O365 cloud-based email users across all three O365 systems (County-wide, District Attorney and Sheriff). Microsoft licenses the ATP security add-on by the user and has offered, through an authorized reseller, a highly discounted per user cost for ATP of \$7.27 per email user per year that will persist through the end of the current O365 enterprise agreement that expires on May 31, 2019.

The annual license/support cost for the existing IronPort email security solution is \$460,515, resulting from a competitive solicitation which was already underway prior to the motion and is scheduled for completion on June 23, 2016. The existing IronPort servers purchased in 2014 do not have a published end-of-life/support date, but typically have a six to eight-year lifespan from the date of purchase based on historical ISD experience with deployed Cisco technologies. Based on a conservative six-year replacement schedule, the estimated IronPort hardware appliance replacement timeframe is Fiscal Year 2019-2020.

Similar to Microsoft with O365 EOP with ATP, Cisco sells its IronPort email security solution through authorized resellers. Based on an average annual increase of 2.5% in IronPort hardware replacement costs, the estimated hardware replacement cost, which was \$149,875 in June 2014, will be approximately \$173,809 in 2020. In addition, the same average annual increase of 2.5%

for annual IronPort platinum support costs is factored into the five-year total cost of ownership comparison below.

FIVE-YEAR TOTAL COST OF OWNERSHIP COMPARISON BY SOLUTION						
	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	Total 5 YR
IronPort	\$460,515	\$472,028	\$483,829	\$669,733	\$508,322	\$2,594,427
O365 EOP with ATP	\$811,136	\$811,136	\$811,136	\$831,414	\$852,200	\$4,117,022

Final estimates for the O365 security software costs would be attained through a competitive bid process. Since Microsoft, through its reseller, guaranteed a three-year price hold through the end of the current O365 enterprise license agreement that expires on May 31, 2019, an average annual increase of 2.5% in O365 EOP with ATP annual license costs was factored into the final two years of the total cost of ownership comparison above.

In addition to the above financial analysis, ISD also conducted a market survey of available products to meet the County's email security needs. ISD and the CISO conducted a Gartner analyst reference call with their subject-matter-expert in this area to discuss Email Gateways with Security Hygiene Capabilities, focusing on Cisco IronPort and Microsoft O365 cloud-based email security, and discovered the following:

- a. Gartner's Magic Quadrant most recent report on Secure Email Gateways was published on June 29, 2015. It identified Microsoft, Cisco, and Proofpoint as the market Leaders.
- b. The Gartner analyst advised that clients that deployed the O365 EOP SPAM filter received an unacceptable amount of unfiltered SPAM, which required them to purchase an additional third-party SPAM filter product.
- c. Proofpoint was not included as part of this email security evaluation, but will be included in future evaluations, along with any additional products in the marketplace at that time.

Response to Action 2:

To sunset the security standard for Cisco's IronPort and Registered Envelope Service solution approved by the Board on June 16, 2009, the CEO will issue a memorandum that will sunset this solution as a standard to County departments by July 1, 2016.

Response to Action 3:

The CISO, in collaboration with ISD, is starting an assessment of the County's information security strategy, including email and web protection, in response to the current and evolving security threat landscape. As part of this assessment, the CISO and ISD will develop a roadmap by December 2016 to update or replace security components to realign with the new strategy. If it is determined that the incumbent IronPort solution should be replaced, a solicitation will be completed before the June 2017 support renewal.

The CISO and ISD will develop the specifications based on the new security requirements for competitive solicitations to replace the appropriate security components, including the aforementioned email security solution.

RECOMMENDATION

Due to the recency of the motion, allow the planned renewal for the incumbent Cisco IronPort software and support for one more year, based on the analysis presented above. Then, dependent on the outcome of the CISO's information security strategy assessment, re-assess the desired future state for replacement via an open and competitive solicitation(s). In addition, a complete review of the Microsoft O365 cloud-based email security components already under contract will be done to determine if there is a benefit to the County's email security posture.

If you have any questions please contact me at (323) 267-2103, via email dchittenden@isd.lacounty.gov or your staff may contact Dave Wesolik (562) 940-2901, via email dwesolik@isd.lacounty.gov or the CISO, Robert Pittman at (213) 253-5631, via email rpittman@ceo.lacounty.gov.

DC:DW:DH:sg

c: IT Board Deputies
Chief Executive Officer
Chief Operating Officer
Assistant Chief Executive Officer, Fesia Davenport
Acting Chief Information Officer
Chief Information Security Officer
Executive Office, Board of Supervisors